

1416 South Park Springfield, IL 62704 217.741.6235 dmfavero@comcast.net

January 13, 2012

Part 6 of 6

Mr. Don Heller U.S. Environmental Protection Agency, Region 5 Land and Chemicals Division 77 West Jackson Blvd., LU-9J Chicago, IL 60604-3507

RE:

Fourth Quarter 2011 Progress Report

RCRA Corrective Action

Allison Transmission, Speedway, IN

USEPA ID Nos. IND006413348 and IND000806828

Dear Mr. Heller:

The attached progress report is submitted on behalf of General Motors LLC (GM), in accordance with the requirements of the Performance-Based Corrective Action Agreement between the U.S. Environmental Protection Agency Region 5 (USEPA) and General Motors Corporation. The progress report covers the fourth quarter of 2011 (October 1, 2011 through December 31, 2011).

Please contact me if you would like to discuss this matter further. Thank you.

Sincerely,

David M. Favero, P.G.

H. Mestinean Lyan for

Project Manager

Attachment A - Fourth Quarter 2011 Progress Report

C: Glynda Oakes, IDEM Office of Land Quality (CD)

Adam Rickert/Pam Thevenow, Marion County Health Department (CD)

Marilyn Dedyne, GM (paper & CD)

Sue Barto, Allison Transmission, Inc. (CD)

Speedway Library (Public Information Repository) (CD)



8/14/2011 Mr. Eric Moosbrugger ARCADIS, Inc. 251 East Ohio St., Suite 800

Indianapolis IN 46204

Project Name: Allison Trans

Project #: IN473.19.7 Workorder #: 1108036

Dear Mr. Eric Moosbrugger

The following report includes the data for the above referenced project for sample(s) received on 8/2/2011 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for your air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Ausha Scott at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Ausha Scott

Project Manager



WORK ORDER #: 1108036

Work Order Summary

CLIENT: Mr. Eric Moosbrugger **BILL TO:** Accounts Payable

ARCADIS, Inc.

ARCADIS, Inc. 251 East Ohio St., Suite 800 630 Plaza Drive Indianapolis, IN 46204 Suite 130

Highlands Ranch, CO 80129

PHONE: P.O. # IN000473.0019.00007 317-231-6500

FAX: 317-231-6514 PROJECT # IN473.19.7 Allison Trans

DATE RECEIVED: 08/02/2011 **CONTACT:** Ausha Scott **DATE COMPLETED:** 08/14/2011

			RECEIPT	FINAL
FRACTION #	NAME	<u>TEST</u>	VAC./PRES.	PRESSURE
01A	A/S BLOWER EFF (080111)	Modified TO-15	Tedlar Bag	Tedlar Bag
02A	SVE BLOWER EFF (080111)	Modified TO-15	Tedlar Bag	Tedlar Bag
03A	Lab Blank	Modified TO-15	NA	NA
03B	Lab Blank	Modified TO-15	NA	NA
04A	CCV	Modified TO-15	NA	NA
04B	CCV	Modified TO-15	NA	NA
05A	LCS	Modified TO-15	NA	NA
05AA	LCSD	Modified TO-15	NA	NA
05B	LCS	Modified TO-15	NA	NA
05BB	LCSD	Modified TO-15	NA	NA

CERTIFIED BY:

Linda d. Fruman

08/14/11 DATE:

Laboratory Director

Certfication numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NY NELAP - 11291, UT NELAP - 9166389892, AZ Licensure AZ0719

Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,

Accreditation number: E87680, Effective date: 07/01/09, Expiration date: 06/30/11

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Air Toxics Ltd.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630 (916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020



LABORATORY NARRATIVE EPA Method TO-15 ARCADIS, Inc. Workorder# 1108036

Two 1 Liter Tedlar Bag samples were received on August 02, 2011. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

Method TO-15 is validated for samples collected in specially treated canisters. As such, the use of Tedlar bags for sample collection is outside the scope of the method and not recommended for ambient or indoor air samples. It is the responsibility of the data user to determine the usability of TO-15 results generated from Tedlar bags.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

- B Compound present in laboratory blank greater than reporting limit (background subtraction not performed).
 - J Estimated value.
 - E Exceeds instrument calibration range.
 - S Saturated peak.
 - Q Exceeds quality control limits.
 - U Compound analyzed for but not detected above the reporting limit.
 - UJ- Non-detected compound associated with low bias in the CCV and/or LCS.
 - N The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue



Summary of Detected Compounds EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: A/S BLOWER EFF (080111)

Lab ID#: 1108036-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
cis-1,2-Dichloroethene	0.50	39	2.0	150
Trichloroethene	0.50	7.8	2.7	42
Tetrachloroethene	0.50	110	3.4	750
Toluene	0.50	1.7	1.9	6.3

Client Sample ID: SVE BLOWER EFF (080111)

Lab ID#: 1108036-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)	
cis-1,2-Dichloroethene	5.0	17	20	69	
Trichloroethene	5.0	32	27	170	
Tetrachloroethene	5.0	2100	34	14000	



Client Sample ID: A/S BLOWER EFF (080111)

Lab ID#: 1108036-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	o080314	Date of Collection: 8/1/11 1:15:00 PM
Dil. Factor:	1.00	Date of Analysis: 8/4/11 06:48 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
cis-1,2-Dichloroethene	0.50	39	2.0	150
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Trichloroethene	0.50	7.8	2.7	42
Tetrachloroethene	0.50	110	3.4	750
Cumene	0.50	Not Detected	2.4	Not Detected
Toluene	0.50	1.7	1.9	6.3

Container Type: 1 Liter Tedlar Bag

		Method
Surrogates	%Recovery	Limits
Toluene-d8	81	70-130
1,2-Dichloroethane-d4	77	70-130
4-Bromofluorobenzene	85	70-130



Client Sample ID: SVE BLOWER EFF (080111)

Lab ID#: 1108036-02A

EPA METHOD TO-15 GC/MS

File Name:	14080413	Date of Collection: 8/1/11 1:30:00 PM
Dil. Factor:	1.00	Date of Analysis: 8/4/11 03:33 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
cis-1,2-Dichloroethene	5.0	17	20	69
Chloroform	5.0	Not Detected	24	Not Detected
1,1,1-Trichloroethane	5.0	Not Detected	27	Not Detected
Trichloroethene	5.0	32	27	170
Toluene	5.0	Not Detected	19	Not Detected
Tetrachloroethene	5.0	2100	34	14000
Cumene	5.0	Not Detected	24	Not Detected

Container Type: 1 Liter Tedlar Bag

<i>,</i> . •		Method	
Surrogates	%Recovery	Limits	
1,2-Dichloroethane-d4	114	70-130	
Toluene-d8	103	70-130	
4-Bromofluorobenzene	85	70-130	



Client Sample ID: Lab Blank Lab ID#: 1108036-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	0080305	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/3/11 01:38 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
Cumene	0.50	Not Detected	2.4	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected

21.		Method Limits	
Surrogates	%Recovery		
Toluene-d8	78	70-130	
1,2-Dichloroethane-d4	80	70-130	
4-Bromofluorobenzene	87	70-130	



Client Sample ID: Lab Blank Lab ID#: 1108036-03B

EPA METHOD TO-15 GC/MS

File Name:	14080407	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/4/11 11:45 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
cis-1,2-Dichloroethene	5.0	Not Detected	20	Not Detected
Chloroform	5.0	Not Detected	24	Not Detected
1,1,1-Trichloroethane	5.0	Not Detected	27	Not Detected
Trichloroethene	5.0	Not Detected	27	Not Detected
Toluene	5.0	Not Detected	19	Not Detected
Tetrachloroethene	5.0	Not Detected	34	Not Detected
Cumene	5.0	Not Detected	24	Not Detected

, p. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.		Method	
Surrogates	%Recovery	Limits	
1,2-Dichloroethane-d4	107	70-130	
Toluene-d8	101	70-130	
4-Bromofluorobenzene	85	70-130	



Client Sample ID: CCV Lab ID#: 1108036-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	o080302	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/3/11 11:03 AM

Compound	%Recovery
cis-1,2-Dichloroethene	100
Chloroform	95
1,1,1-Trichloroethane	83
Trichloroethene	112
Tetrachloroethene	123
Cumene	125
Toluene	95

Container Type: 1474 Not Applicable		Method
Surrogates	%Recovery	Limits
Toluene-d8	80	70-130
1,2-Dichloroethane-d4	84	70-130
4-Bromofluorobenzene	99	70-130



Client Sample ID: CCV Lab ID#: 1108036-04B

EPA METHOD TO-15 GC/MS

File Name: 14080402 Date of Collection: NA
Dil. Factor: 1.00 Date of Analysis: 8/4/11 09:39 AM

Compound	%Recovery
cis-1,2-Dichloroethene	107
Chloroform	118
1,1,1-Trichloroethane	105
Trichloroethene	108
Toluene	112
Tetrachloroethene	88
Cumene	110

71.		Method	
Surrogates	%Recovery	Limits	
1,2-Dichloroethane-d4	107	70-130	
Toluene-d8	105	70-130	
4-Bromofluorobenzene	89	70-130	



Client Sample ID: LCS Lab ID#: 1108036-05A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	0080303	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/3/11 11:54 AM

Compound	%Recovery
cis-1,2-Dichloroethene	107
Chloroform	94
1,1,1-Trichloroethane	83
Trichloroethene	109
Tetrachloroethene	118
Cumene	119
Toluene	89

No. of the same		Method
Surrogates	%Recovery	Limits
Toluene-d8	80	70-130
1,2-Dichloroethane-d4	82	70-130
4-Bromofluorobenzene	97	70-130



Client Sample ID: LCSD Lab ID#: 1108036-05AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	o080304	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/3/11 12:42 PM

Compound	%Recovery
cis-1,2-Dichloroethene	107
Chloroform	92
1,1,1-Trichloroethane	81
Trichloroethene	104
Tetrachloroethene	116
Cumene	116
Toluene	86

Container Type: 1474 Not Applicable		Method
Surrogates	%Recovery	Limits
Toluene-d8	77	70-130
1,2-Dichloroethane-d4	79	70-130
4-Bromofluorobenzene	95	70-130



Client Sample ID: LCS Lab ID#: 1108036-05B

EPA METHOD TO-15 GC/MS

File Name:	14080405	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 8/4/11 10:59 AM

Compound	%Recovery
cis-1,2-Dichloroethene	104
Chloroform	114
1,1,1-Trichloroethane	106
Trichloroethene	104
Toluene	107
Tetrachloroethene	85
Cumene	107

		Method
Surrogates	%Recovery	Limits
1,2-Dichloroethane-d4	106	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	90	70-130



Client Sample ID: LCSD Lab ID#: 1108036-05BB

EPA METHOD TO-15 GC/MS

File Name: 14080406 Date of Collection: NA
Dil. Factor: 1.00 Date of Analysis: 8/4/11 11:23 AM

Compound	%Recovery
cis-1,2-Dichloroethene	103
Chloroform	117
1,1,1-Trichloroethane	108
Trichloroethene	104
Toluene	107
Tetrachloroethene	87
Cumene	109

3 P		Method
Surrogates	%Recovery	Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	102	70-130
4-Bromofluorobenzene	90	70-130



Air Toxics Ltd. Sample Receipt Confirmation Cover Page

Thank you for choosing Air Toxics Ltd. We have received your samples and have listed any Sample Receipt Descrepancies below.

In order to expedite analysis and reporting, please review the attached information for For corrections ca **Ausha Scott at 916-985-1000**

ATL will proceed with the analysis as specified on the Chain of Custody and Sample Receipt Summary page.

Please note: The Sample Receipt Confirmation, including the total workorder charge, is subject to change upon secondary review. Our aim is to provide a confirmation to you in a timely manner. Sample Receipt Discrepancies, if any, may not include discrepancies regarding sample receipt pressure(s). Additionally, the Chain of Custody (COC) will be provided with the final report.

In accordance with your company's contract, this account is required to have a PO that is fully executed by both parties which also covers the cost of the workorder before any data can be released. Please ensure that you have given all appropriate information to our Project Manager so that there will be no delay in reporting of the data you are requesting.



SAMPLE RECEIPT SUMMARY

WORKORDER 1108036

Client Date Promised: 08/16/11

Phone Date Completed:

Mr. Eric Moosbrugger ARCADIS, Inc. 317-231-6500 **Date Received:** 8/2/11

251 East Ohio St., Suite 800 Fax PO#: IN000473.0019.00007

Indianapolis, IN 46204 Project#: IN473.19.7 Allison Trans

Sales Rep: TL

S Rep: 1L Logged By: NWP

Fraction	Sample #	<u>Analysis</u>	Collected	Receipt <u>Vac./Pres.</u>	Amount\$
01A	A/S BLOWER EFF (080111)	Modified TO-15	8/1/2011	Tedlar Bag	\$160.00
02A	SVE BLOWER EFF (080111)	Modified TO-15	8/1/2011	Tedlar Bag	\$160.00

Note: Samples received after 3 P.M. PST are considered to be received on the following work day.

Atlas Project Name/Profile#: Allison Transmission SVE Monthly/6365

BILL TO: Accounts Payable

ARCADIS, Inc. 630 Plaza Drive

Suite 130

Highlands Ranch, CO 80129

TERMS: PWP-NTE 120

Reporting Method: TO-15 (Sh)-Arcadis (Allison Transmission)

Analysis Code: TO-14A

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630 (916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020



1 1 0 8 0 3 6 CHAIN-OF-CUSTODY / Analytical Request Document The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Sample Condition Temp in C Received on Ice Y/N Sealed Cooler Y/N Samples Intact Y/N	AIRBILL NO.	7606x	SHIPMENT METHOD			14,	13,	12,		10.	9.	00,	_1	6,	5.	4	٠ :	3 346	CIA : A/S BLOW	Sample Identification:	- 1	E-mail: EMOOSE	16: 21 - 221 -	INDRUS, IN		Address: 25/ =.		Required Client Information:
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	Arendis	ARCADIS	AFFILIATION	TOTAL NUMBER OF CONTAINERS													1000	11511	110011 1	Date Collected			QA/QC Requirements:	4	Laboratory Contact:	Laboratory Location:	Laboratory:	PAGE
PARAMETERS	11/11/2	8/1/11	DATE	ERS														/330 2	315 2	# Containers Unpreserved HCl H2SO4	Pres		ements:	Date:		ation: Folson	AIR TOXICS	/ OF 1
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Method: TO-15 (Sh)-Arcadis (Allison Transmission)

CAS Number	Compound	Rpt. Limit (ppbv)	
156-59-2	cis-1,2-Dichloroethene	0.50	
67-66-3	Chloroform	0.50	
71-55-6	1,1,1-Trichloroethane	0.50	
79-01-6	Trichloroethene	0.50	
127-18-4	Tetrachloroethene	0.50	
98-82-8	Cumene	0.50	
108-88-3	Toluene	0.50	

CAS Number	Surrogate	Method Limits	
2037-26-5	Toluene-d8	70-130	
17060-07-0	1,2-Dichloroethane-d4	70-130	
460-00-4	4-Bromofluorobenzene	70-130	



Unreturned Media/Equipment

The following media/equipment are outstanding:

Shipped on: Jul 25 2011 2:50PM

Equipment Type	Physical ID	Outstanding Qty	<u>Amount</u>
1 Liter Summa Canister	1040	1	\$750.00
1 Liter Summa Canister	30811	1	\$750.00
1 Liter Summa Canister	34623	1	\$750.00
1 Liter Summa Canister	8028	1	\$750.00
Filter		4	\$200.00
Gauge-Vacuum		1	\$50.00



1 1 0 8 0 3 6 CHAIN-OF-CUSTODY / Analytical Request Document The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Sample Condition Temp in C Received on Ice Y/N Sealed Cooler Y/N Samples Intact Y/N	AIRBILL NO.	7606x	SHIPMENT METHOD			14,	13,	12,		10.	9.	00,	_1	6,	5.	4	٠ :	3 346	CIA : A/S BLOW	Sample Identification:	- 1	E-mail: EMOOSE	16: 21 - 221 -	INDRUS, IN		Address: 25/ =.		Required Client Information:
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Additional Comments: * ULENT SPECIFIC	Charles Company	Chel Baker	LERS RELINQUISHED BY / AFFILIATION	TOTAL								Miller million de extension of the exten						E	080111) GE	Walid Matrix Codes: WG Groundwater WB Borehole Water WS Surface Water SO Soil SE Sediment See Back for Additional Codes Matrix Codes			Project Name: H/15on / MAS	12000473.0019.0	18	-	Report To: ERIC MOOSBROWLER	
	Arendis	ARCADIS	AFFILIATION	TOTAL NUMBER OF CONTAINERS													1000	11511	110011 1	Date Collected			QA/QC Requirements:	4	Laboratory Contact:	Laboratory Location:	Laboratory:	PAGE
PARAMETERS	11/11/2	8/1/11	DATE	ERS														/330 2	315 2	# Containers Unpreserved HCl H2SO4	Pres		ements:	Date:		ation: Folson	AIR TOXICS	/ OF 1
Sampl	1415	1400	TIME	A STATE OF THE PARTY OF THE PAR														×		HNO3 NaOH Other: Mod. TD-15	Preservative			TAT: S		N, CA		
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ATL will proceed with the analysis as specified on the Chain of Custody and Sample Receipt Summary page.

Please note: The Sample Receipt Confirmation, including the total workorder charge, is subject to change upon secondary review. Our aim is to provide a confirmation to you in a timely manner. Sample Receipt Discrepancies, if any, may not include discrepancies regarding sample receipt pressure(s). Additionally, the Chain of Custody (COC) will be provided with the final report.

In accordance with your company's contract, this account is required to have a PO that is fully executed by both parties which also covers the cost of the workorder before any data can be released. Please ensure that you have given all appropriate information to our Project Manager so that there will be no delay in reporting of the data you are requesting.



SAMPLE RECEIPT SUMMARY

WORKORDER 1108184

Client Date Promised: 08/23/11

Phone Date Completed:

Mr. Eric Moosbrugger
ARCA DIS Inc.
317-231-6500

Date Received: 8/9/11

ARCADIS, Inc.

251 East Ohio St., Suite 800

Fax

Po#: IN000473.0019.0007

Transmission

Analysis Code: TO-14A

Sales Rep: TL

Logged By: NWP

Fraction	Sample #	<u>Analysis</u>	Collected	Amount\$
01A	SVE-42-C1 (072811)	Modified TO-15	7/28/2011	\$160.00
02A	SVE-42-C2 (072811)	Modified TO-15	7/28/2011	\$160.00

Misc. Charges 1 Liter Summa Canister (2) @ \$15.00 each., Shipment 80339 \$30.00

Note: Samples received after 3 P.M. PST are considered to be received on the following work day.

Atlas Project Name/Profile#: Allison Transmission SVE Monthly/6365

BILL TO: Accounts Payable

ARCADIS, Inc. 630 Plaza Drive

Suite 130

Highlands Ranch, CO 80129

TERMS:

Reporting Method: TO-15 (Sh)-Arcadis (Allison Transmission)



CHAIN-OF-CUSTODY / Analytical Request Document
The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Temp in 'C Received on Ice Y/N Sealed Cooler Y/N Samples Intact Y/N	AIRBILL NO. Sample Condition	FEO-EX	SHIPMENT METHOD	AND THE PROPERTY OF THE PROPER	4 2	12,	10,	9	oc	7.	<u>, , , , , , , , , , , , , , , , , , , </u>	4	3.	OUX 2. SUE-42-6		Sample Identification:	E-mail: Eric, Men brugger	Phone: (1) + - 2 (1-1) 00 Fax:	13	8	إسد	Required Client Information:	
Additional Comments: $\mathcal{U}_{\mathcal{S}}$		Scott Mal	NO. OF COOLERS RELINQUISH											Ca (072811)	C) (072811)	Walid Marrix Codes: WG Groundwater WB Borcholc Water WS Surface Water SO Soil SE Sediment See Back for Additional Codes	-@A	Project Number: 111,30 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	204		Сору То:	on: Report To: だべい Musiking and	
Use Client Spaific parameter Distribution: WHITE-Fully Executed Copy YELLOW-		metyt / Arcadis	RELINQUISHED BY / AFFILIATION	TOTAL NUMBER OF CONTAINERS										A. r 07/28/11 05:48	A: ~ 07/28/1 03:05	Matrix Code Date Collected Time Collected		13,0019,00015	Requested Due Date:	Laboratory Contact:	Laboratory Location:	Laboratory: Air	PAGE
//s/ Receiving Laboratory Cop		8/8/11 13:00	TE											×	×	# Containers Unpreserved HCI H2SO4 HNO3 NaOH Other:	Preservative	1	(TA			TOX. 15 CTO	CF .
Sampler Name: Stott Make 14 Sampler Signature: Soft Multiple S		Mr (ME	RECEIVED BY / AFFILIATION											X.	*	TO-15 (client	· Specil	Analysis and Method	TAT: 570		Š		
Date: 8/8/11		Cabo 11/2/10/16/8	TION DATE TIME			342, 1805 300 /4 CJ								Pagrameter 1:5+	Chest specific -	Remarks/Lah ID		Vethod	EOUTORO	SSOW Ref. Code:		ID# Nº 08947	



Method: TO-15 (Sh)-Arcadis (Allison Transmission)

CAS Number	Compound	Rpt. Limit (ppbv)	
156-59-2	cis-1,2-Dichloroethene	0.50	
67-66-3	Chloroform	0.50	
71-55-6	1,1,1-Trichloroethane	0.50	
79-01-6	Trichloroethene	0.50	
127-18-4	Tetrachloroethene	0.50	
98-82-8	Cumene	0.50	
108-88-3	Toluene	0.50	

CAS Number	Surrogate	Method Limits	
2037-26-5	Toluene-d8	70-130	
17060-07-0	1,2-Dichloroethane-d4	70-130	
460-00-4	4-Bromofluorobenzene	70-130	



Unreturned Media/Equipment

The following media/equipment are outstanding:

Shipped on: Jul 25 2011 2:50PM

Equipment Type	Physical ID	Outstanding Qty	Amount
1 Liter Summa Canister	1040	1	\$750.00
1 Liter Summa Canister	8028	1	\$750.00



12/15/2011 Mr. Eric Moosbrugger ARCADIS, Inc. 251 East Ohio St., Suite 800

Indianapolis IN 46204

Project Name: Allison Trans

Project #: IN473.19.7 Workorder #: 1112128

Dear Mr. Eric Moosbrugger

The following report includes the data for the above referenced project for sample(s) received on 12/7/2011 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for your air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Ausha Scott at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Ausha Scott

Project Manager



WORK ORDER #: 1112128

Work Order Summary

CLIENT: Mr. Eric Moosbrugger BILL TO: Accounts Payable

ARCADIS, Inc.

ARCADIS, Inc. 251 East Ohio St., Suite 800 630 Plaza Drive Indianapolis, IN 46204 Suite 130

Highlands Ranch, CO 80129

PHONE: P.O. # IN000473.0019 317-231-6500

FAX: 317-231-6514 PROJECT # IN473.19.7 Allison Trans

DATE RECEIVED: 12/07/2011 **CONTACT:** Ausha Scott **DATE COMPLETED:** 12/15/2011

			RECEIPT	FINAL
FRACTION #	NAME	TEST	VAC./PRES.	PRESSURE
01A	AIR STRIPPER BLOWER EFFLUENT (1	Modified TO-15	Tedlar Bag	Tedlar Bag
02A	SVE BLOWER EFFLUENT (120611)	Modified TO-15	Tedlar Bag	Tedlar Bag
03A	Lab Blank	Modified TO-15	NA	NA
04A	CCV	Modified TO-15	NA	NA
05A	LCS	Modified TO-15	NA	NA
05AA	LCSD	Modified TO-15	NA	NA

CERTIFIED BY:

Sinda d. Fruman

DATE: <u>12/15/11</u>

Laboratory Director

Certfication numbers: AZ Licensure AZ0719, CA NELAP - 02110CA, LA NELAP - 02089, NY NELAP - 11291, TX NELAP - T104704434-11-3, UT NELAP - CA009332011-1, WA NELAP - C935 Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act, Accreditation number: E87680, Effective date: 07/01/11, Expiration date: 06/30/12.

Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Air Toxics Ltd.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630 (916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020



LABORATORY NARRATIVE EPA Method TO-15 ARCADIS, Inc. Workorder# 1112128

Two 1 Liter Tedlar Bag samples were received on December 07, 2011. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

Method TO-15 is validated for samples collected in specially treated canisters. As such, the use of Tedlar bags for sample collection is outside the scope of the method and not recommended for ambient or indoor air samples. It is the responsibility of the data user to determine the usability of TO-15 results generated from Tedlar bags.

Dilution was performed on samples AIR STRIPPER BLOWER EFFLUENT (120611) and SVE BLOWER EFFLUENT (120611) due to the presence of high level target species.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

- B Compound present in laboratory blank greater than reporting limit (background subtraction not performed).
 - J Estimated value.
 - E Exceeds instrument calibration range.
 - S Saturated peak.
 - Q Exceeds quality control limits.
 - U Compound analyzed for but not detected above the reporting limit.
 - UJ- Non-detected compound associated with low bias in the CCV and/or LCS.
 - N The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue



Summary of Detected Compounds EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: AIR STRIPPER BLOWER EFFLUENT (120611)

Lab ID#: 1112128-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Trichloroethene	1.7	8.1	8.9	44
Tetrachloroethene	1.7	370	11	2500

Client Sample ID: SVE BLOWER EFFLUENT (120611)

Lab ID#: 1112128-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
cis-1,2-Dichloroethene	6.2	10	25	41
Trichloroethene	6.2	18	34	95
Tetrachloroethene	6.2	1300	42	8900



Client Sample ID: AIR STRIPPER BLOWER EFFLUENT (120611)

Lab ID#: 1112128-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	2120718	Date of Collection: 12/6/11 1:45:00 PM
Dil. Factor:	3.33	Date of Analysis: 12/7/11 08:53 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
cis-1,2-Dichloroethene	1.7	Not Detected	6.6	Not Detected
Chloroform	1.7	Not Detected	8.1	Not Detected
1,1,1-Trichloroethane	1.7	Not Detected	9.1	Not Detected
Trichloroethene	1.7	8.1	8.9	44
Tetrachloroethene	1.7	370	11	2500
Cumene	1.7	Not Detected	8.2	Not Detected
Toluene	1.7	Not Detected	6.3	Not Detected

Container Type: 1 Liter Tedlar Bag

,,		Method
Surrogates	%Recovery	Limits
Toluene-d8	92	70-130
1,2-Dichloroethane-d4	93	70-130
4-Bromofluorobenzene	108	70-130



Client Sample ID: SVE BLOWER EFFLUENT (120611)

Lab ID#: 1112128-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	2120719	Date of Collection: 12/6/11 1:30:00 PM
Dil. Factor:	12.5	Date of Analysis: 12/7/11 09:26 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
cis-1,2-Dichloroethene	6.2	10	25	41
Chloroform	6.2	Not Detected	30	Not Detected
1,1,1-Trichloroethane	6.2	Not Detected	34	Not Detected
Trichloroethene	6.2	18	34	95
Tetrachloroethene	6.2	1300	42	8900
Cumene	6.2	Not Detected	31	Not Detected
Toluene	6.2	Not Detected	24	Not Detected

Container Type: 1 Liter Tedlar Bag

		Method	
Surrogates	%Recovery	Limits	
Toluene-d8	98	70-130	
1,2-Dichloroethane-d4	95	70-130	
4-Bromofluorobenzene	91	70-130	



Client Sample ID: Lab Blank Lab ID#: 1112128-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	2120706	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/7/11 10:34 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
Cumene	0.50	Not Detected	2.4	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected

Container Type: 1177 Het Applicable		Method	
Surrogates	%Recovery	Limits	
Toluene-d8	99	70-130	
1,2-Dichloroethane-d4	98	70-130	
4-Bromofluorobenzene	99	70-130	



Client Sample ID: CCV Lab ID#: 1112128-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	2120702	Date of Collection: NA
Dil. Factor:	1.00	Date of Analysis: 12/7/11 07:31 AM

Compound	%Recovery
cis-1,2-Dichloroethene	96
Chloroform	93
1,1,1-Trichloroethane	92
Trichloroethene	101
Tetrachloroethene	99
Cumene	104
Toluene	94

Container Type: 147. Het Applicable		Method	
Surrogates	%Recovery	Limits	
Toluene-d8	99	70-130	
1,2-Dichloroethane-d4	96	70-130	
4-Bromofluorobenzene	106	70-130	



Client Sample ID: LCS Lab ID#: 1112128-05A

EPA METHOD TO-15 GC/MS FULL SCAN

ı			
	File Name:	2120703	Date of Collection: NA
	Dil. Factor:	1.00	Date of Analysis: 12/7/11 08:10 AM

Compound	%Recovery
cis-1,2-Dichloroethene	100
Chloroform	95
1,1,1-Trichloroethane	96
Trichloroethene	104
Tetrachloroethene	102
Cumene	108
Toluene	97

		Method	
Surrogates	%Recovery	Limits	
Toluene-d8	100	70-130	
1,2-Dichloroethane-d4	92	70-130	
4-Bromofluorobenzene	106	70-130	



Client Sample ID: LCSD Lab ID#: 1112128-05AA

EPA METHOD TO-15 GC/MS FULL SCAN

ı				
	File Name:	2120704	Date of Collection: NA	
ı	Dil. Factor:	1.00	Date of Analysis: 12/7/11 08:44 AM	

Compound	%Recovery
cis-1,2-Dichloroethene	102
Chloroform	95
1,1,1-Trichloroethane	95
Trichloroethene	103
Tetrachloroethene	103
Cumene	107
Toluene	95

3 1		Method
Surrogates	%Recovery	Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	92	70-130
4-Bromofluorobenzene	107	70-130



Air Toxics Ltd. Sample Receipt Confirmation Cover Page

Thank you for choosing Air Toxics Ltd. We have received your samples and have listed any Sample Receipt Descrepancies below.

In order to expedite analysis and reporting, please review the attached information for For corrections ca **Ausha Scott at 916-985-1000**

ATL will proceed with the analysis as specified on the Chain of Custody and Sample Receipt Summary page.

Please note: The Sample Receipt Confirmation, including the total workorder charge, is subject to change upon secondary review. Our aim is to provide a confirmation to you in a timely manner. Sample Receipt Discrepancies, if any, may not include discrepancies regarding sample receipt pressure(s). Additionally, the Chain of Custody (COC) will be provided with the final report.

In accordance with your company's contract, this account is required to have a PO that is fully executed by both parties which also covers the cost of the workorder before any data can be released. Please ensure that you have given all appropriate information to our Project Manager so that there will be no delay in reporting of the data you are requesting.



SAMPLE RECEIPT SUMMARY

WORKORDER 1112128

Client Date Promised: 12/21/11

Phone Date Completed:
Mr. Eric Moosbrugger

ARCADIS, Inc. 317-231-6500 **Date Received:** 12/7/11

251 East Ohio St., Suite 800 **Fax PO#:** IN000473.0019

Indianapolis, IN 46204 Project#: IN473.19.7 Allison Trans

Total \$: \$ 320.00

Analysis Code: TO-14A

Sales Rep: TL Logged By: NWP

				Receipt	
Fraction	Sample #	<u>Analysis</u>	Collected	Vac./Pres.	Amount\$
01A	AIR STRIPPER BLOWER EFFLUEN	Modified TO-15	12/6/2011	Tedlar Bag	\$160.00
02A	SVE BLOWER EFFLUENT (120611)	Modified TO-15	12/6/2011	Tedlar Bag	\$160.00

Note: Samples received after 3 P.M. PST are considered to be received on the following work day.

Atlas Project Name/Profile#: Allison Transmission SVE Monthly/6365

BILL TO: Accounts Payable

ARCADIS, Inc. 630 Plaza Drive

Suite 130

Highlands Ranch, CO 80129

TERMS: PWP-NTE 120

Reporting Method: TO-15 (Sh)-Arcadis (Allison Transmission)

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630 (916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

0-1

22 11 12

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately

DUCORE REALM

02R 2. OLA I. = 0 Sample Identification: 12 Address: 251 E. OHIOST. #500 Required Client Information: Samples Intact Sealed Cooler Received on Ice 14 13. E-mail: Phone: IMPRIS AIRBILL NO. SHIPMENT METHOD なるが SVE BLOWER Sample Condition MA STRIPPER BLOWER EFFLUENT (120611 317-231-6500 Y / Z BEAL EMOSSEVILLER PARCAOIS -US.COM NO. OF COOLERS Efficient Additional Comments: * CLIENT SOX Project Name: Allisons Trapos Project Number: 1473.19. 7 P.O.: 1200473.0019 Invoice To: CORPORATE Copy To: SARAH FISHER Report To: Exic Mansarvices 120611 Valid Matrix Codes:
WG Groundwater
WB Borehole Water RELINQUISHED BY / AFFILIATION See Back for SE Sediment WS Surface Water Additional Codes Soil TOTAL NUMBER OF CONTAINERS 60 30 SEECT EL Matrix Code (MACROIS 220 QA/QC Requirements: Requested Due Date: Laboratory Contact: Laboratory Location: Laboratory: 4 Date Collected PAGE PARAMETERS 1230 Sh81 Time Collected 12/12 Q. ٧ # Containers Folsom, CA Toxics DATE 12-6-11 Unpreserved HC1 Preservative H2SO4 HNO3 TIME 14:45 NaOH Other: TAT: Sampler Signature: Sampler Name: TD-15 Mad. F RECEIVED BY / AFFILIATION 2 [] Feb. CX TAG Analysis and Method BUTRUR ID# SSOW Ref. Code: E027028 THE STREET Z Remarks/Lab ID Date: 04312 12/12 DATE 124-11 R ACTZ 12-6-11 TIME 2250 14:45



Method: TO-15 (Sh)-Arcadis (Allison Transmission)

CAS Number	Compound	Rpt. Limit (ppbv)	
156-59-2	cis-1,2-Dichloroethene	0.50	
67-66-3	Chloroform	0.50	
71-55-6	1,1,1-Trichloroethane	0.50	
79-01-6	Trichloroethene	0.50	
127-18-4	Tetrachloroethene	0.50	
98-82-8	Cumene	0.50	
108-88-3	Toluene	0.50	

CAS Number	Surrogate	Method Limits	
2037-26-5	Toluene-d8	70-130	
17060-07-0	1,2-Dichloroethane-d4	70-130	
460-00-4	4-Bromofluorobenzene	70-130	

0-1

22 11 12

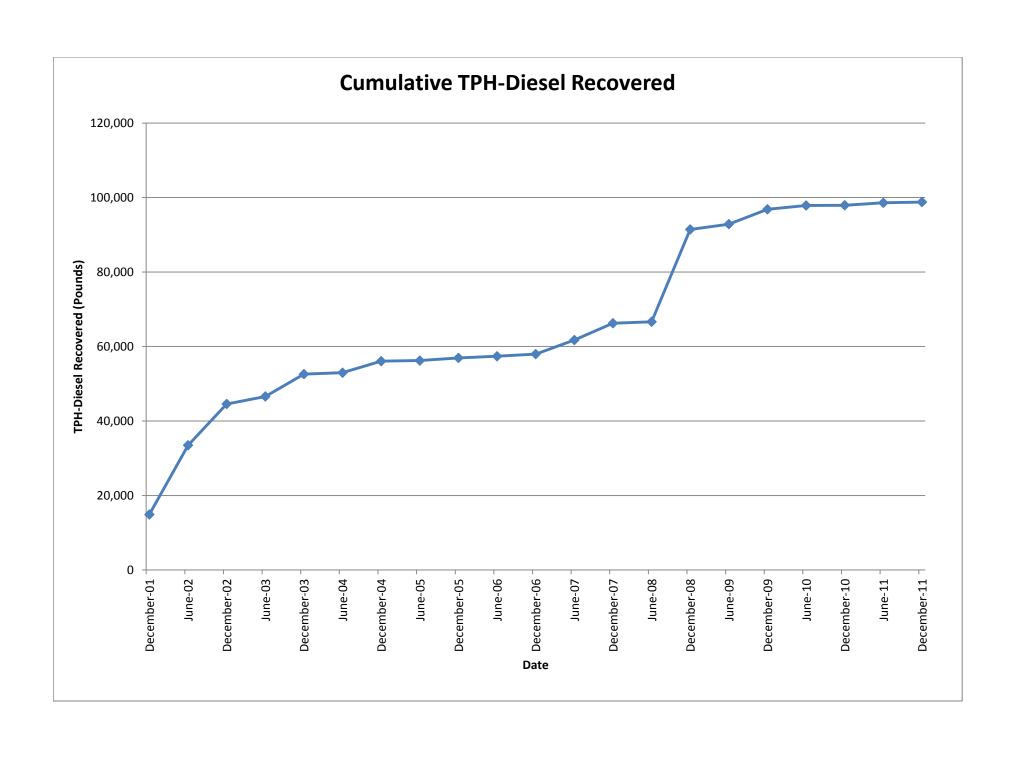
CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately

DUCORE REALM

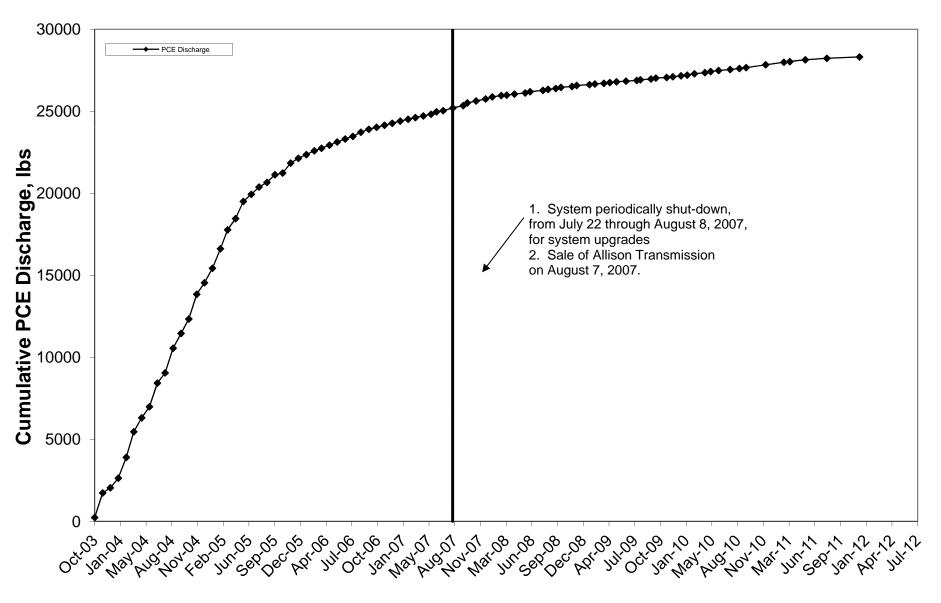
02R 2. OLA I. = 0 Sample Identification: 12 Address: 251 E. OHIOST. #500 Required Client Information: Samples Intact Sealed Cooler Received on Ice 14 13. E-mail: Phone: IMPRIS AIRBILL NO. SHIPMENT METHOD なるが SVE BLOWER Sample Condition MA STRIPPER BLOWER EFFLUENT (120611 317-231-6500 Y / Z BEAL EMOSSEVILLER PARCAOIS -US.COM NO. OF COOLERS Efficient Additional Comments: * CLIENT SOX Project Name: Allisons Trapos Project Number: 1473.19. 7 P.O.: 1200473.0019 Invoice To: CORPORATE Copy To: SARAH FISHER Report To: Exic Mansarvices 120611 Valid Matrix Codes:
WG Groundwater
WB Borehole Water RELINQUISHED BY / AFFILIATION See Back for SE Sediment WS Surface Water Additional Codes Soil TOTAL NUMBER OF CONTAINERS 60 30 SEECT EL Matrix Code (MACROIS 220 QA/QC Requirements: Requested Due Date: Laboratory Contact: Laboratory Location: Laboratory: 4 Date Collected PAGE PARAMETERS 1230 Sh81 Time Collected 12/12 Q. ٧ # Containers Folsom, CA Toxics DATE 12-6-11 Unpreserved HC1 Preservative H2SO4 HNO3 TIME 14:45 NaOH Other: TAT: Sampler Signature: Sampler Name: TD-15 Mad. F RECEIVED BY / AFFILIATION 2 [] Feb. CX LAC Analysis and Method BUTRUR ID# SSOW Ref. Code: E027028 THE STREET Z Remarks/Lab ID Date: 04312 12/12 DATE 124-11 R ACTZ 12-6-11 TIME 2250 14:45

Appendix B

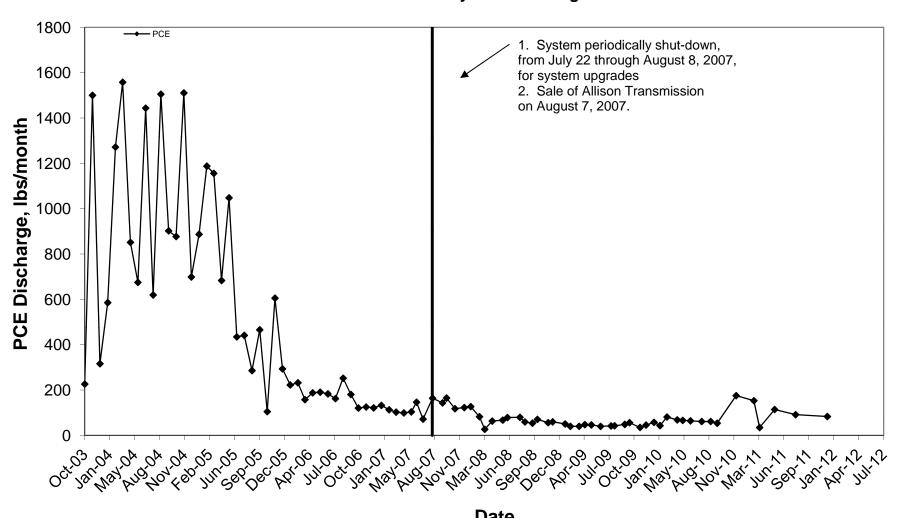


Appendix C

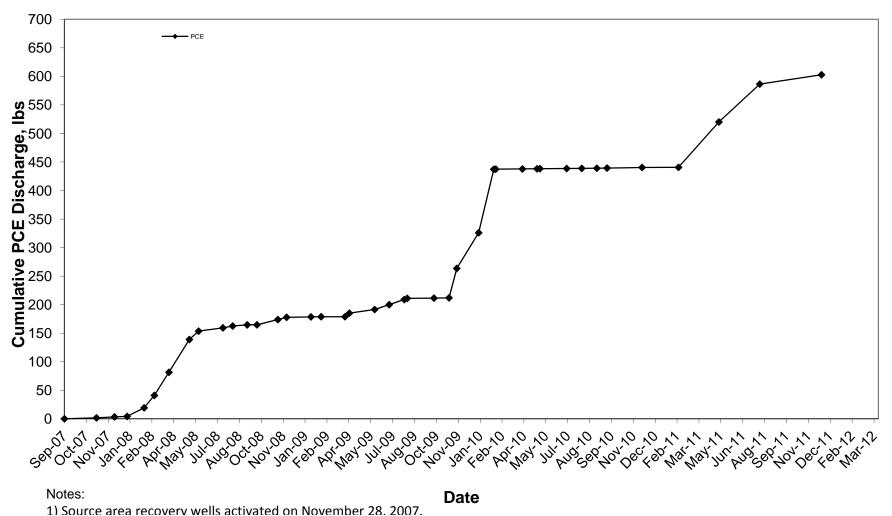
Emission Unit General Motors LLC (SVE Remediation System) Cumulative PCE Discharge



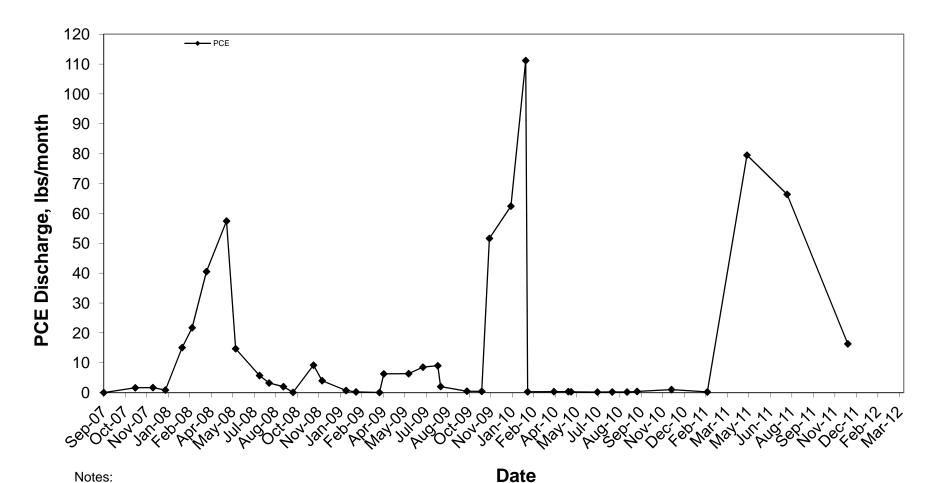
Emission Unit General Motors LLC (SVE Remediation System) Monthly PCE Discharge



Emission Unit General Motors LLC (Air Stripper) Cumulative PCE Discharge



Emission Unit General Motors LLC (Air Stripper) Monthly PCE Discharge



1) Source area recovery wells activated on November 28, 2007.